

# Outsulation® Plus MD

## Case Study



### Dryvit System Makes the Grade in Oklahoma City



It is not an overstatement to say that clay brick masonry is the foundation of modern Oklahoma City. The look of brick and stone masonry continues to be very popular with area architects and building owners. However, the ever-increasing demands of climbing construction costs, energy efficiency, and life-cycle performance led architect Fred Quinn of Quinn & Associates to research different materials to meet the demands of this high-performance facility.

The original design of the **Metro Career Academy** building called for 24,000 square feet of clay brick and 13,000 square feet of cast stone. When Quinn learned that Dryvit's Outsulation Plus MD System with Custom Brick™ and Limestone™ finish would save nearly 50% in construction costs (materials and installation) versus clay brick and stone, it was an easy decision.

CLADDING ASSEMBLIES	INSTALLED PRICE	INSTALLED PRICE PER SQ. FT.
Clay Brick & Limestone Block	\$961,594	\$25.99
Clay Brick & Cast Stone Block	\$836,594	\$22.61
Dryvit Outsulation Plus MD	\$501,000	\$13.54
SAVINGS	Up To \$460,594	47.9% !

The Outsulation assembly allowed Quinn to increase the insulation value of the wall, enhance the moisture protection of the building envelope, and lower the cost of the exterior cladding, while retaining the desired look of masonry.

**Project Name:**  
Metro Career Academy  
Oklahoma City, OK

**Architect:**  
Quinn & Associates  
Oklahoma City, OK

**General Contractor:**  
CMS Willowbrook  
Oklahoma City, OK

**Dryvit Applicator:**  
DMG Masonry  
Arlington, TX

**Dryvit System & Finish:**  
Outsulation Plus MD  
Custom Brick & Limestone

In addition to this dramatic reduction in cladding costs, making the decision to switch to the Outsulation system during the Schematic Design phase allowed the owners of the Metro Career Academy to **harvest the full range of benefits** from the light-weight cladding, including less structural support required, a reduced construction schedule, LEED points, projected energy savings and fewer delivery trucks.

By substituting the 1.5 pound per square foot adhesively-attached Outsulation system for the labor-intensive 40 + pounds per square foot masonry, the designer was able to subtract more than 96% of the anticipated weight of the building's skin. **Eliminating 1,424,500 pounds** from the exterior walls of the building produced additional savings in the concrete and steel support system required to carry that load. Analysis by Trumbull Dean Structural Engineers reveals reductions in the amount of concrete placed in the spread footings and the steel in the structural frame of the building realized by the use of Dryvit's Outsulation system. Installed pricing was calculated by the General Contractor, CMS Willowbrook.



MATERIALS SAVED	QUANTITY SAVED	COST SAVINGS
Concrete in Footings & Pads	17.57 cubic yards	\$6,149.50
Steel in Structural Frames	13.45 tons	\$44,385.00
<b>TOTAL SAVINGS</b>		<b>\$50,534.50</b>

Cris Callins, Manager of Preconstruction with CMS Willowbrook, estimated that the reduced demand for structural support and the more rapid installation of the Outsulation Plus MD system allowed her project manager to **cut a full 15 weeks from the MCA building's construction schedule**, lowering manpower, equipment and insurance costs as well as meeting the owner's demanding completion date.

The MCA project utilized 4" of exterior continuous insulation (ci) as part of the Outsulation Plus MD System, which helped the Academy to achieve their goal of **LEED Gold** certification for this project. The project earned the full ten points in the Energy & Atmosphere Credit 1 category.



Utilizing state-of-the-art Trace™ Energy Usage Modeling software, mechanical engineer Michael Fair of PSA Consulting Engineers calculated the performance of the constructed MCA building against the baseline of a building of the same size and configuration which simply satisfied the requirements of Oklahoma City's prevailing building and energy codes. Measured against this 'to code' structure, the carefully designed and

constructed Metro Career Academy exhibited extraordinary energy efficiency. **The software anticipates an energy savings of 34.8% and an energy cost reduction of 42.8% annually.** Without taking into consideration the rapidly-rising costs of energy or of inflation, it is possible to conservatively estimate **the value of these energy savings over a fifty-year life cycle of the MCA facility at more than \$1,700,000!**

All of the materials necessary to complete the required 37,000 square feet of Dryvit Systems' Outsulation Plus MD with Custom Brick Specialty Finish were **delivered to the jobsite on two semi trucks.** In contrast, the same amount of masonry would require an additional 22 semi trucks clogging the roads and jobsite and spewing pollutants into the air.

By electing to use Outsulation Plus MD with Custom Brick and Limestone Finishes on the new Metro Career Academy, architect and designer Fred Quinn put to work a power tool that had far-reaching effects on his exciting new project. The engineered, fully-tested system includes:



- Fluid-applied air & water-resistive barrier
- Fluid-applied flexible flashings at all rough openings
- Drainage plane with weep details
- Exterior continuous insulation
- High-impact reinforced assembly
- Flexible aesthetic finish coat

Even as a 'value engineering' substitute for other claddings late in the design and construction process, an Outsulation system can greatly reduce the cost of installation and provide a lifetime of energy savings.

Of equal value in new construction and renovations, the Outsulation Plus MD system – from flashings to finish - is installed by one contractor. Compare this to the masonry alternative which may require as many as seven separate contracts and contractors.

**“Even with all of the assembly’s components included, we have seen that Dryvit’s Outsulation system is far less expensive in time and money than the old clay brick masonry cladding.”**

**-Fred Quinn, AIA  
MCA Architect**

For more information about Outsulation Plus MD, or any of the systems and products sold by Dryvit Systems, Inc., call Technical Services at 1-800-556-7752 ext. 9 or visit us on the web at [www.dryvit.com](http://www.dryvit.com).